

# CONTENTS

## Editorial

### THE PROCESS OF EDUCATION WITH AI: FROM DIGITAL TO GENERATIVE PEDAGOGY

Boris Aberšek . . . . . 1012

## Articles

### TOWARDS AN ACTIVE ENVIRONMENTAL CITIZEN: SCIENCE EDUCATION AS A CATALYST FOR SUSTAINABILITY IN STUDENTS' THINKING AND BEHAVIOR

Sarah Alotaibi, Tahani Alrosaa, Jawaher Alrashood, Rommel AlAli, Ali Al-Barakat, Ali Abdullatif, Ashraf Zaher, Mamdouh Mosaad Helali . . . . . 1017

### EVALUATION OF THE PSYCHOMETRIC PROPERTIES OF INSTRUMENTS FOR ASSESSING UNIVERSITY STUDENTS' ANALYTICAL THINKING SKILLS IN ZOOLOGY COURSE

Dwi Setyo Astuti, Sajidan Sajidan, Suciati Suciati, Mohammad Masykuri . . . . . 1033

### RELATIVE EFFECTIVENESS OF COLLABORATIVE AND ANONYMOUS PEER ASSESSMENT TECHNIQUES ON STUDENTS' ACHIEVEMENT IN ECOLOGICAL CONCEPTS

Ozichi Okwukwe Benson, Maria Tsakeni, Stephen Chinedu Nwafor . . . . . 1049

### THE CONNECTION BETWEEN COGNITIVE AND AFFECTIVE DIMENSIONS OF PLANT AWARENESS IN RELATION TO UNDERSTANDING THE COOLING FUNCTIONS OF VEGETATION

Tereza Brčáková, Renata Ryplová, Tomáš Mrkvička . . . . . 1061

### PRE-SERVICE TEACHERS' EXPERIENCES IN USING 3D PENS FOR PRIMARY BIOLOGY AND CHEMISTRY EDUCATION

Peter Paul Canuto, Dorothy Silva . . . . . 1078

### ADVANCING GENDER EQUITY IN STEM EDUCATION: THE ROLE OF INQUIRY-BASED COOPERATIVE LEARNING AND CLASSROOM ENGAGEMENT IN CHALLENGING GENDER ROLE STEREOTYPES

Ping Chen, Aminuddin Bin Hassan, Firdaus Mohamad Hamzah, Sallar Salam Murad, Zixin Xu . . . . . 1101

### APPLICATION OF SELECTED MODELS OF MIND IN THEORIES OF PHYSICS EDUCATION

Peter Demkanin, Daša Červeňová, David Sands . . . . . 1117

### ECOLOGICAL SCIENTISTS' DECISION-MAKING UNDER UNCERTAINTY AND IGNORANCE: IMPLICATIONS FOR BIOLOGY EDUCATION

Hyojeong Hwang, Jun-Ki Lee . . . . . 1132

### PRIMARY SCHOOL TEACHERS' PCK DEVELOPMENT FOR MODELING-BASED INSTRUCTION: A KNOWLEDGE EXCHANGE PERSPECTIVE WITHIN A PROFESSIONAL LEARNING COMMUNITY

Hyunju Kim, Kiyoun Lee . . . . . 1148

### TYPES AND CHARACTERISTICS OF UNIVERSITY STUDENTS' SCIENCE IDENTITY

Juwon Kim, Sungman Lim . . . . . 1169

### THE EFFECT OF CONTEXTUALIZED VS. DECONTEXTUALIZED ILLUSTRATIONS ON ATTENTION ALLOCATION AND CREATIVE TRANSFER IN ENERGY-SAVING COMMUNICATION

Zhe Liang, Lei Zha . . . . . 1189

### EFFECTS OF ENGINEERING DESIGN-BASED STEM APPROACH ON STUDENTS' CONCEPTUAL UNDERSTANDING, ENGINEERING DESIGN PERFORMANCE, AND SCIENTIFIC CREATIVITY

Albert Andry E. Panergayo, Lydia S. Roleda . . . . . 1208

### BRIDGING THE INDIVIDUAL AND THE SYSTEM: PRESCHOOL TEACHERS' AGENCY IN IMPLEMENTATION FOR SUSTAINABLE DEVELOPMENT IN EARLY CHILDHOOD SETTINGS IN SOUTH-EASTERN EUROPE

Aleksandra Šindić, Adrijana Višnjić-Jevtić, Jurka Lepičnik Vodopivec . . . . . 1221

## Information

INFORMATION FOR CONTRIBUTORS . . . . . 1235

BalticSTE2027 . . . . . 1236

NATURAL SCIENCE EDUCATION . . . . . 1237

